II. FINDINGS OF FACT

A. FINDINGS ON THE QUALIFICATION OF BUREAU OF LAND MANAGEMENT TO RESERVE WATER (Mont. Code Ann. § 85-2-316(1)(1991); ARM 36.16.107B(1)(a).)

1. The United States Department of the Interior, Bureau of Land Management (BLM) is a United States government agency and is therefore qualified to reserve water pursuant to Mont. Code Ann. § 85-2-316. (Bd. Exh. 38-A, p.1.)

2. The Federal Land Policy and Management Act of 1976 (Public Law 94-579) provides that "the public lands be managed in a manner...that will provide food and habitat for fish and wildlife...and that will provide outdoor recreation..." Executive Order 11990 directs the BLM to "[t]ake action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural beneficial values of wetlands." Therefore, the United States Department of the Interior, Bureau of Land Management has the authority to apply for instream flow reservations for fish, wildlife, and their habitat on BLM lands within the State of Montana in the Upper Missouri River pursuant to Mont. Code Ann. § 85-2-316(1.)

3. BLM submitted an application to the Board of Natural Resources and Conservation in June 1989 to reserve water to maintain a minimum flow, level, or quality of water throughout the year or portions of the year on 31 sources of water located in the headwaters subbasin of the Missouri River. The waters applied for, including reach boundaries and amounts of water requested, are shown in Table 1. (Bd. Exh. 38-A, pg. 1.)

B. FINDINGS ON THE PURPOSE OF THE WATER RESERVATION APPLIED FOR BY BUREAU OF LAND MANAGEMENT (Mont. Code Ann. § 85-2-316(4)(a)(1991); ARM 36.16.107B(1)(b).

4. The purpose of the reservation of instream flows is to benefit the public by reserving instream flows for fish, wildlife, and recreational purposes. (Bd. Exh. 38-A, p.1.) This is a beneficial use as defined by ARM 36.16.102(B).

5. The preserving of instream flows will benefit other wildlife, aquatic, and terrestrial that are dependent upon riparian vegetation sustained by instream flows. (Bd. Exh. 38-A, p. 1.)

6. Recreational activities such as hunting, fishing, hiking, and camping will also benefit from the reservations. (Bd. Exh. 38-A, p. 1.)

TABLE 1
SUMMARY OF RESERVATIONS REQUESTED BY THE BUREAU OF LAND MANAGEMENT

STREAM	LOCATION	STREAM MILES WITHIN PUBLIC LANDS	YEAR-ROUND REQUEST (CFS)	INSTANTANEOUS PEAK DISCHARGE REQUEST (CFS)
Deep Creek	T2N-R12W-S20	.9	30	500
Bear Creek	T2N-R12W-S34	1.1	2.5	50
Canyon Creek	T2S-R9W-S6	.9	5.0	110
Moose Creek	T2S-R9W-S13&23 T1S-R8W-S7,8,9&18	5.5	8	70
Camp Creek	T2S-R8W-S2,9, 10,11,17,19&20	6.5	5	50
Willow Creek	T4S-R9W-S31&32	1.9	12	130
East Fork Dyce Creek	T6S-R12W-S14, 23,26&35	3.75	1.5	9
West Fork Dyce Creek	T6S-R12W-S14, 22,23&26	3.8	1	5
Bloody Dick Ck.	T9S-R15W-S23	1	20	270
Medicine Lodge Creek	T12S-R12W-S13 T13S-R12W-S2&26	1	9	50
Rape Creek	T10S-R13W-S21&28	1	1	5
Shenon Creek	T10S-R13W-S29,30, 32&33; T10S-R14W-S25	3.5	1	13
Black Canyon Creek	T11S-R14W-S19,20, 21	2.8	2.5	35
Bear Creek (Horse Prarie Creek Drainage)	T10S-R15W-S34	1.3	1	50
Trapper Creek	T10S-R15W-S34	1.3	1	10
Frying Pan Ck.	T10S-R25W-S22,27&28	1	1.5	35

TABLE 1 (cont.)

STREAM	LOCATION	STREAM MILES WITHIN PUBLIC LANDS	YEAR-ROUND REQUEST (CFS)	INSTANTANEOUS PEAK DISCHARGE REQUEST (CFS)
Cabin Creek	T14S-R12W-S1&12	1.3	1	4
Indian Creek	T14S-R12W-S24	1.3	1	5
Simpson Creek	T14S-R12W-S25&30	0.8	1	5
Deadman Creek	T15S-R10W-S22	2.0	4.5	50
Big Sheep Ck.	T13S-R9W-S30 T13S-R10W-S25,35&36 T14S-R10W-S2,10,15,22&34 T15S-R10W-S3,10&22	10.0	40	300
North Fork Greenhorn Creek	T8-R4W-S13&24	1.3	3.5	35
Jones Creek	T14S-R3W-S33	1.1	2.0	20
Peet Creek	T15S-R4W-S3&10 T14S-R4W-S34	2.25	1.5	30
Corral Creek	T14S-R1E-S22&27	1.5	2.5	20
Odell Creek	T14S-R1W-S31	0.8	11	225
Long Creek	T13S-R4W-S1&2	3.9	5	110
Hellroaring Ck.	T14S-R1E-S35&26	0.75	15	250
Tom Creek	T14S-R1E-S32	1.2	2	25
East Fork Blacktail Deer Creek	T11S-R5W-S27,34&35	3.4	18	215
West Fork Blacktail Deer Creek	T12S-R6W-S35	2.5	3	25

C. FINDINGS ON THE NEED FOR THE WATER RESERVATION APPLIED FOR BY THE BUREAU OF LAND MANAGEMENT (Mont. Code Ann. § 85-2-316(4)(a)(ii)(1991); ARM 36.16.107B(2).

7. The BLM has established a need for the reservation pursuant to ARM 36.16.107B(2) based on the following:

a. Instream water right for fish, wildlife, and recreational purposes can be obtained only by application for a reservation and not through a water permit. (Bd. Exh. 38-A, p. 22);

b. past experience has shown that stream flows will continue to be depleted; increasing the annual occurrence of critically low flows if minimum flows aren't protected. (Bd. Exh. 38-A, p. 1, Appendix A.)

8. The following streams are particularly subject to future appropriations that would adversely affect resource values.

Stream	Type of Potential Appropriation
Frying Pan Creek	Mining
Trapper Creek	Mining
Willow Creek	Mining/Hydroelectric
Moose Creek	Mining/Hydroelectric
Bear Creek (Big Hole Drainage)	Irrigation
Deep Creek	Irrigation
Medicine Lodge Creek	Irrigation
Bloody Dick Creek	Irrigation/Mining
W. Fork Dyce Creek	Mining
E. Fork Dyce Creek	Mining
Canyon Creek	Mining/Hydroelectric
Camp Creek	Mining/Hydroelectric
Big Sheep Creek	Irrigation/Hydroelectric
Deadman Creek	Irrigation
Rape Creek	Mining

(Bd. Exh. 38-A, p. 8.)

D. FINDINGS ON THE AMOUNT OF WATER NEEDED FOR THE WATER RESERVATION APPLIED FOR BY THE BUREAU OF LAND MANAGEMENT (Mont. Code Ann. § 85-2-316(4)(a)(iii)(1991); ARM 36.16.107B(3).)

9. The following chart shows the fishery and recreational values of each stream.

Stream Name	Beneficial Use
Deep Creek	Survival and rearing of brook and rainbow trout. Spawning of Arctic grayling and brook trout. Recreation, sport fishery.
Bear Creek	Survival and rearing of brook and rainbow trout. Recreation, sport fishery.
Canyon Creek	Survival and rearing of rainbow, rainbow x cutthroat, brook trout, impt. spawning area. Recreation, sport fishery.
Moose Creek	Survival and rearing of rainbow trout, rainbow x cutthroat, impt. spawning area. Recreation, sport fishery.
Camp Creek	Survival and rearing of brook trout, rainbow trout, cutthroat trout, impt. spawning area. Recreation, sport fishery.
Willow Creek	Survival and rearing of rainbow trout, rainbow x cutthroat trout, brook trout. Recreation, sport fishery.
East Fork Dyce Creek	Survival and rearing of rainbow x cutthroat trout, brook trout.
West Fork Dyce Creek	Survival and rearing of rainbow x cutthroat trout, brook trout.
Bloody Dick Creek	Survival and rearing of rainbow trout, brook trout, mountain whitefish. Recreation, sport fishery.
Medicine Lodge Creek	Survival and rearing of brook trout, rainbow trout. Recreation, sport fishery.

Rape Creek	Spawning and survival of westslope cutthroat trout.
Shenon Creek	Spawning and survival of brook trout, westslope cutthroat trout, rainbow x cutthroat trout. Recreation, sport fishery.
Black Canyon	Survival and rearing of brook trout.
Bear Creek (Horse Prairie Drainage)	Spawning, rearing, and survival of brook trout, westslope cutthroat trout.
Trapper Creek	Spawning, rearing survival of westslope cutthroat trout, brook trout.
Frying Pan Creek	Spawning, rearing survival of westslope cutthroat trout.
Cabin Creek	Spawning, rearing survival of westslope cutthroat trout.
Indian Creek	Spawning, rearing survival of westslope cutthroat trout.
Simpson Creek	Spawning, rearing survival of westslope cutthroat trout.
Deadman Creek	Rearing and survival of cutthroat trout, rainbow trout, cutthroat x trout. Sport fishery.
Big Sheep Creek	Survival and rearing of rainbow trout and brown trout. Sport fishery. Major recreation area.
North Fork Greenhorn Creek	Survival and rearing of brook trout, westslope cutthroat trout.
Jones Creek	Spawning, rearing, and survival of westslope cutthroat trout.
Peet Creek	Spawning, rearing, and survival of westslope cutthroat trout.
Corral Creek	Spawning, rearing, and survival of brook trout, Yellowstone cutthroat trout. Historic Arctic grayling habitat.

Odell Creek	Spawning, rearing, and survival of westslope cutthroat trout. Historic Arctic grayling habitat.
Long Creek	Spawning, rearing, and survival of cutthroat trout, brook trout. Historic Arctic grayling habitat.
Hellroaring Creek	Spawning, rearing, and survival of brook trout, cutthroat trout. Historic Arctic grayling habitat. Sport fishery.
Tom Creek	Spawning, rearing, and survival of brook trout. Historic Arctic grayling habitat.
East Fork Blacktail Deer Creek	Survival and rearing of brook trout, rainbow trout, mountain whitefish. Sport fishery. Major riparian dependent wildlife values.
West Fork Blacktail Deer Creek	Survival and rearing of brook trout. Riparian dependent wildlife values.

(Bd. Exh. 38-A, pp.2-6; BLM Exh. 4, pp. 13-76.)

10. The westslope cutthroat trout, once common throughout the Upper Missouri River drainage is classified as a species of special concern in Montana. (BLM Exh. 4, p. 35.)

11. Westslope cutthroat trout are very intolerant of environmental disturbances and habitat changes, are poor competitors with introduced species, readily hybridize with rainbow trout and are highly susceptible to fishing pressure. These factors have combined to greatly reduce the native westslope cutthroat population of the Upper Missouri drainage. (Bd. Exh. 38-A, p. 39.)

12. Twelve of the streams with BLM application for reservation have populations of westslope cutthroat trout. (BLM Exh. 10, Bozorth Dir., p. 4.)

13. The population of fluvial Arctic grayling is in decline and the Big Hole River drainage is the habitat for the last remaining population of fluvial grayling in the lower 48 United States. (BLM Exh. 12, p. 1.)

14. The Arctic grayling population of the Big Hole River drainage is continuing a decline that threatens their continued viability. (BLM Exh. 12, p. 4.)

15. The values of riparian areas adjacent to the streams on which reservations are sought includes diversity of plant and wildlife species, water purification, flood mitigation, and recreational opportunities. (Bd. Exh. 38-A, p. 9.)

16. The riparian areas of the streams applied for include over 40 species of birds, 17 species of mammals, and 4 reptile and amphibian species. Many species of special concern as well as the peregrine falcon, bald eagle, and grizzly bear make use of these riparian areas. (Bd. Exh. 38-A, p. 9.)

17. Instream flows are needed in order to protect areas of food production in streams, and to insure that fish have access to cover or shelter. Flows are also needed for favorable spawning and rearing conditions. (BLM Exh. 4, pp. 3-5.)

18. Riffles are the area of a stream that are most affected by low flows. Flows that maintain suitable riffles also maintain suitable pools and runs. (BLM Exh. 5.)

19. The wetted perimeter method of determining flows needed for fishery purposes determines a range of instream flows relating to the width of the wetted perimeter of a stream bottom in selected riffle areas. There are generally two inflection points. Flows above the upper inflection point have less effect on wetted perimeter. The area for food production is considered near optimal at this upper inflection point. (BLM Exh. 4, p. 2.)

20. At flows below the upper inflection point the stream pulls away from the riffle bottom. At the lower inflection point the rate of loss of wetted perimeter accelerates and the area available for food production decreases rapidly. Flows below the lower inflection point are undesirable based on impacts on food, cover, and habitat. Flows above the upper inflection point provide near optimal trout habitat. (BLM Exh. 4, pp. 3, 5.)

21. In general only streams with exceptional resident fish populations or those providing crucial spawning and/or rearing habitat or those with the presence of species of special concern (Westslope Cutthroat or fluvial Arctic Grayling) warrant an upper inflection point reservation. (BLM Exh. 4, p. 7.)

22. In general a poor fish population would justify a flow at the low inflection point. (BLM Exh. 4, p. 7.)

23. Upper inflection points were calculated for each stream as set forth in the application by a fully qualified fisheries biologist with training in wetted perimeter method. (Bd. Exh. 38-A.)

24. The wetted perimeter and discharge relationships for a stream is a suitable method to determine instream flow amounts

needed for fisheries in the streams of Montana. (BLM Exh. 11, p. 3.)

25. Several recent independent evaluations of the wetted perimeter inflection point method have led to the conclusion that the method produces accurate minimum flow recommendations. (BLM Exh. 3, Bierbach Dir., p. 4.)

26. Channel maintenance flows are discharges necessary to maintain the form and characteristics of existing streams for their proper functioning. Reductions in streamflow can result in streambed migration. Fish spawning beds and riparian vegetation directly benefit from bankfall discharges. (BLM Exh. 3, Bierbach Dir., p. 4.)

28. The instantaneous peak discharge for a two-year recurrence interval is suitable for channel maintenance. This discharge closely approximates the bankfall discharge. (BLM Exh. 3, Bierbach Dir., p. 5.)

29. The channel maintenance flows requested by BLM are set forth in the application. They were prepared by a qualified hydrologist using acceptable scientific methods. (Bd. Exh. 40; BLM Exh. 6, pp. 1, 2.)

30. In Deep Creek both BLM and DFWP have applied the wetted perimeter method to derive their instream flow request. DFWP measurements indicated the inflection point as 18 cfs. (Bd. Exh. 37-A.2, p. 2-297.) BLM measurements (prepared earlier under contract by DFWP) indicated the inflection point as 30 cfs. (Bd. Exh. 38-A, p. 12.) The 18 cfs figure is the more accurate measurement of the upper inflection point and no reservation in excess of the upper inflection point is justified. (Tr. Day 13, p. 164.)

31. In Cabin Creek the BLM applied the wetted perimeter method to derive their instream flow request. The upper inflection point was less than 1 cfs and BLM rounded up their application to 1 cfs. (Tr. Day 13, Bierbach Dir., p. 146.) DFWP measurements indicate the upper inflection point for Cabin Creek is .4 cfs. (Bd. Exh. 37-A.2, p. 58.) The .4 cfs figure is an accurate measurement of the upper inflection point and no reservation in excess of that amount is justified.

32. In West Fork Blacktail Deer Creek the amount determined by the DFWP as the low inflection point more accurately reflects the instream flow needed because of the lower fishery values. (Bd. Exh. 37-A.2, p. 2-130.) The lower inflection point on West Fork Blacktail Deer Creek is 1 cfs. (Bd. Exh. 37-A.2, p. 2-132.)

33. In East Fork Dyce Creek both BLM and DFWP have applied the wetted perimeter method to derive their instream flow

request. DFWP measurements indicated the inflection point as 1.4 cfs. (Bd. Exh. 37-A.2, p. 2-219.) BLM measurements (prepared earlier under contract by DFWP) indicated the inflection point as 1.5 cfs. (Bd. Exh. 38-A, p. 12.) The 1.4 cfs figure is the more accurate measurement of the upper inflection point and no reservation in excess of the upper inflection point is justified. (Tr. Day 13, p. 164.)

34. In Indian Creek the BLM applied the wetted perimeter method to derive their instream flow request. The upper inflection point was less than 1 cfs and BLM rounded up their application to 1 cfs. (Bierbach Dir., Tr. Day 13, p. 146.) DFWP measurements indicate the upper inflection point for Indian Creek is .2 cfs. (Bd. Exh. 37-A.2, p. 2-55.) The .2 cfs figure is an accurate measurement of the upper inflection point and no reservation in excess of that amount is justified.

35. In Jones Creek both BLM and DFWP have applied the wetted perimeter method to derive their instream flow request. DFWP measurements indicated the inflection point as 1.9 cfs. (Bd. Exh. 37-A.2, p. 2-42.) BLM measurements (prepared earlier under contract by DFWP) indicated the inflection point as 2.0 cfs. (Bd. Exh. 38-A, p. 12.) The 1.9 cfs figure is the more accurate measurement of the upper inflection point and no reservation in excess of the upper inflection point is justified. (Tr. Day 13, p. 164.)

36. In Rape Creek the BLM applied the wetted perimeter method to derive their instream flow request. The upper inflection point was less than 1 cfs and BLM rounded up their application to 1 cfs. (Bierbach Dir., Tr. Day 13, p. 146.) DFWP measurements indicate the upper inflection point for Rape Creek is .4 cfs. (Bd. Exh. 37-A.2, p. 2-89.) The .4 cfs figure is an accurate measurement of the upper inflection point and no reservation in excess of that amount is justified.

37. In Long Creek both BLM and DFWP have applied the wetted perimeter method to derive their instream flow request. DFWP measurements indicate the inflection point as 3.4 cfs. (Bd. Exh. 37-A.2, p. 2-48.) BLM measurements (prepared earlier under contract by DFWP) indicated the inflection point as 5.0 cfs. (Bd. Exh. 38-A, p. 12.) The 3.4 cfs figure is the more accurate measurement of the upper inflection point and no reservation in excess of the upper inflection point is justified. (Tr. Day 13, p. 164.)

38. In Shenon Creek the BLM applied the wetted perimeter method to derive their instream flow request. The upper inflection point was less than 1 cfs and BLM rounded up their application to 1 cfs. (Bierbach Dir., Tr. Day 13, p. 146.) DFWP measurements indicate the upper inflection point for Shenon Creek is .4 cfs. (Bd. Exh. 37-A.2, p. 2-76.) The .4 cfs figure is an

accurate measurement of the upper inflection point and no reservation in excess of that amount is justified.

39. In Peet Creek both BLM and DFWP have applied the wetted perimeter method to derive their instream flow request. DFWP measurements indicated the inflection point as .9 cfs. (Bd. Exh. 37-A.2, p. 2-45.) BLM measurements (prepared earlier under contract by DFWP) indicated the inflection point as 1.5 cfs. (Bd. Exh. 38-A, p. 12.) The .9 cfs figure is the more accurate measurement of the upper inflection point and no reservation in excess of the upper inflection point is justified. (Tr. Day 13, p. 164.)

40. In Simpson Creek the BLM applied the wetted perimeter method to derive their instream flow request. The upper inflection point was less than 1 cfs and BLM rounded up their application to 1 cfs. (Bierbach Dir., Tr. Day 13, p. 146.) DFWP measurements indicate the upper inflection point for Simpson Creek is .7 cfs. (Bd. Exh. 37-A.2, p. 2-62.) The .7 cfs figure is an accurate measurement of the upper inflection point and no reservation in excess of that amount is justified.

41. In Tom Creek both BLM and DFWP have applied the wetted perimeter method to derive their instream flow request. DFWP measurements indicated the inflection point as 1.4 cfs. (Bd. Exh. 37-A.2, p. 2-35.) BLM measurements (prepared earlier under contract by DFWP) indicated the inflection point as 2.0 cfs. (Bd. Exh. 38-A, p. 12.) The 1.4 cfs figure is the more accurate measurement of the upper inflection point and no reservation in excess of the upper inflection point is justified. (Tr. Day 13, p. 164.)

42. In Trapper Creek the BLM applied the wetted perimeter method to derive their instream flow request. The upper inflection point was less than 1 cfs and BLM rounded up their application to 1 cfs. (Bierbach Dir., Tr. Day 13, p. 146.) DFWP measurements indicate the upper inflection point for Trapper Creek is .7 cfs. (Bd. Exh. 37-A.2, p. 2-58.) The .7 cfs figure is an accurate measurement of the upper inflection point and no reservation in excess of that amount is justified.

43. In West Fork Dyce Creek the BLM applied the wetted perimeter method to derive their instream flow request. The upper inflection point was less than 1.4 cfs and BLM rounded up their application to 1.4 cfs. (Bierbach Dir., Tr. Day 13, p. 146.) DFWP measurements indicate the upper inflection point for West Fork Dyce Creek is .7 cfs. (Bd. Exh. 37-A.2, p. 2-115.) The .7 cfs figure is an accurate measurement of the upper inflection point and no reservation in excess of that amount is justified.

44. Except as set forth above in Findings of Fact 30 through 43, the amount of water applied for by the BLM is the amount needed to fulfill the purposes of the reservation. Otherwise, the amounts set forth in Findings of Fact 30 through 43 are the amounts needed to fulfill the purposes of the reservation.

45. The actual discharges were calculated from an equation developed from similar gauged streamflows in western Montana. (BLM Exh. 3, Bierbach Dir., pp. 5, 21.)

46. There is one stream in BLM's application where the instream annual flow reservation request may exceed 50% of the average annual flow of record at a gauged site. (Bd. Exh. 38-A, p. 14.)

47. Big Sheep Creek is a gauged stream where the 50% limit would limit the amount applied for. The average annual flow of Big Sheep Creek is 65 cfs. (Bd. Exh. 40, p. 13.) Fifty percent of the average annual flow is 32.5 cfs. (Bd. Exh. 41, p. 58.)

D. FINDINGS ON THE AMOUNT OF WATER NEEDED FOR THE WATER RESERVATION APPLIED FOR BY BUREAU OF LAND MANAGEMENT (Mont. Code Ann. § 85-2-316(4)(a)(iii)(1991); ARM 36.16.107B(3).)

48. The direct benefits of reserving the requested instream flows include helping preserve the fisheries resource and the continuation of fishing opportunities, recreational opportunities and maintenance of existing riparian communities. (BLM Exh. 3, Bierbach Dir., pp. 5-6.)

49. Eight species of special concern and three threatened or endangered species reside in streams where reservations were requested. (BLM Exh. 3, Bierbach Dir., p. 6.)

50. Instream flows allow establishment or continued existence of highly productive riparian zones. (Bd. Exh. 10, p. 3.)

51. Instream flows maintain existing habitat for elk, moose, and deer near the stream reaches. (Bd. Exh. 38-A, p. 15.)

52. Direct costs to BLM would be administrative costs to monitor future permit application and assess their impact upon reservations. (Bd. Exh. 38-A, p. 15.)

53. There are no proposals for irrigation, mining, or hydroelectric projects that conflict with the proposed reservations. (Bd. Exh. 38-A, p. 15.)

54. Instream flow reservations may have some minor indirect costs to existing water users if the reservants object to changes

in existing rights. All junior water right holders including reservants have the right to object to changes in existing rights. (BLM Exh. 14, p. 3.) Such objections do impact existing water rights by allowing the reservant to object to changes. (DFWP Exh. 11, p. 7.)

55. Reservants objections, if any, may increase transaction costs for existing water rights holders who wish to transfer or otherwise change water rights. (Duffield Cross, Tr. Day 10, p. 17.)

56. An objection may in some cases, prevent a change from occurring but only if protected instream flows are adversely affected as a result of the change. (Mont. Code Ann. § 85-2-402.)

57. Objectors to BLM instream reservations have not quantified any indirect cost to existing water rights holders which would result from granting the instream flow reservation. (Duffield Cross, Tr. Day 10, pp. 67, 171.)

58. There are indirect costs that result to existing water right holders by granting instream reservations. These costs have not been quantified by the applicant.

59. The direct and indirect costs of granting the instream flow requests where there are no competing reservations applied for are negligible.

60. For BLM's instream flow reservation the benefits and costs to be considered may be summarized as follows:

Direct Benefits	Fish, wildlife and recreation, riparian protection
Indirect Benefits	Hydropower, water quality
Direct Cost	BLM enforcement
Indirect Cost	Foregone water consumption for irrigation or other uses Economic opportunity costs to parties other than the reservant

(Bd. Exh. 38-A, pp. 13, 15.)

61. A no-action alternative to granting instream flow reservations could result in costs to recreation, fish, and wildlife, water quality, and other economies. (BLM Exh. 3, Bierbach Dir., p. 2.)

62. Other alternative actions could be taken to improve or protect instream flows, such as intensification of water conservation measures, leasing of water rights, constructing offstream storage facilities, conditioning water permits, closing basins and applying the public trust doctrine. (DFWP Exh. 38, pp. 75-84.)

63. These alternatives are either more costly, limited in applicability, legally untested or logistically infeasible for basin-wide utilization. (DFWP Exh. 37, Knudson Dir., p. 15; BLM Exh. 14, p. 3.)

64. There are no other reasonable alternatives with greater net benefits. (Bd. Exh. 41, pp. S-8, 34.)

65. Depending on the location, timing, and amount of water diverted, new water use permits could cause an irretrievable loss of water quality, fisheries, and opportunities for recreation. (Bd. Exh. 40, p. 244.)

66. Incremental streamflow depletions will continue to reduce critical components of the natural environment, including fishery resources, wildlife riparian areas and water quality. (DFWP Exh. 38, p. 73.)

67. Reservations for instream flow are the only way to protect streamflow for water quality, fisheries and recreation on nearly all streams where such reservations are requested. (Bd. Exh. 40, p. 244.)

68. BLM's instream flow reservation would not have adverse impacts to public health, safety and welfare. (Bd. Exh. 40, pp. 243-244.)

69. In general, the impacts to public health, safety and welfare from BLM instream flow reservations are positive and beneficial. (Bd. Exh. 40, pp. 243-244.)

70. The instream flows requested by BLM as modified by the Board are necessary to maintain the existing resident fish populations, to provide passage for migratory fish species in certain streams, to protect spawning and rearing habitats of both resident and migratory species, to protect the habitats of "Species of Special Concern" such as the Westslope Cutthroat trout, Arctic Grayling. The flows are also necessary to help protect the habitat for those wildlife species which depend on the streams and their riparian zones for food, water and shelter, including the bald eagle, peregrine falcon, whooping crane and grizzly bear, all of which are threatened or endangered species. (Bd. Exh. 38-A.)

E. FINDINGS THAT THE WATER RESERVATION APPLIED FOR BY BUREAU OF RECLAMATION IS IN THE PUBLIC INTEREST (Mont. Code Ann. § 85-2-316(4)(a)(iv)(1991); ARM 36.16.107B(4).)

71. The BLM has submitted a management plan for instream flow reservation. (Bd. Exh. 38-A, p. 16.)

72. The management plan does not foresee continuous gauging of BLM reservation because the streams are small headwater streams that present economic and practical problems in gauging. (Bd. Exh. 38-A, p. 16.)

73. A change in use that decreases flows at the bottom of a reach could adversely affect an instream reservation.

74. BLM will monitor operation applications and inventory and manage riparian areas in conjunction with the instream flows. (Bd. Exh. 38-A, p. 116.)

75. Further information concerning streamflows above the monitoring point will be needed before the instream flow reservation can be adequately monitored and enforced.

76. Because the flows applied for are at a particular point, in order to effectively monitor changes requested by senior water users, additional information will be needed so that the BLM can respond on a case-by-case method.

77. A change by a senior appropriator occurring within a reach or a change that affects a reach could adversely affect instream flow in that reach.

78. BLM is capable of exercising reasonable diligence towards feasibly financing its project(s), and applying reservation water to beneficial use in accordance with the management plan. (ARM 36.16.107B(7).)

79. The water reservation of the applicant will be used wholly within the state and only within the Missouri River basin (ARM 36.16.107B(5) and (6).)

80. In those steams and stream reaches where BLM's instream flow reservations overlap with DHES' instream requests, all such reservations should be concurrent, rather than cumulative. (Bd. Exh. 40, p. 11; Bd. Exh. 41, p. 68.)

81. The public interest in protecting domestic and stockwater rights with a priority date on or after July 1, 1985 and perfected prior to the final date of this Order and the public interest in protecting municipal reservations with a July 1, 1985 priority date outweigh the values protected by the BLM reservation.

82. The water reservation as modified and conditioned herein would not adversely affect any water right with a priority date before July 1, 1985. (Mont. Code Ann. § 85-2-316(9)(e) ARM 36.16.107B(8).)

III. CONCLUSIONS OF LAW

1. BLM is a qualified applicant for a water reservation. (Mont. Code Ann. § 85-2-316(1)(1991).)

2. The purpose of the BLM's application is a beneficial use. (Mont. Code Ann. § 85-2-316(4)(a)(i)(1991); ARM 36.16.107B(1)(b).)

3. The need for the BLM application has been established. (Mont. Code Ann. § 85-2-316(4)(a)(ii)(1991); ARM 36.16.107B(2).) Specifically, BLM has demonstrated that there is a reasonable likelihood that future in-state competing water uses would consume, degrade and otherwise affect the water available for the purpose of BLM's reservation and BLM has demonstrated the water resource values warrant reserving water for the requested purpose.

4. The methodologies used by BLM are generally accurate and suitable. (ARM 36.16.107B(3)(a).) The BLM has established the amount of water needed to fulfill its reservation. (Mont. Code Ann. §85-2-316(4)(a)(iii)(1991); ARM 36.16.107B(3).)

5. The benefits of granting these instream flows as limited greatly exceed the direct and indirect costs. Upon a weighing and balancing, it has been established to the satisfaction of the Board that the water reservation requested by the Bureau of Land Management as modified and conditioned herein is in the public interest. (Mont. Code Ann. § 85-2-316(4)(a)(iv)(1991); ARM 36.16.107B(4).)

6. Upper Missouri River water reservations approved by the Board shall have a priority date of July 1, 1985. (Mont. Code Ann. § 85-2-331(4).) The Board may determine the relative priorities of all reservations. (Mont. Code Ann. § 85-2-316(a)(e).)

7. The Board may grant, deny, modify, or condition any reservation applied for. In no case may the Board make a reservation for more than the amount applied for. (Mont. Code Ann. § 85-2-316.)

8. The Board has no authority under the reservation statutes or any other statutes to determine, or alter, any water right that is not a reservation. (Mont. Code Ann. § 85-2-316(14).)

9. This reservation does not guarantee minimum flows.

IV. ORDER

1. Subject to all applicable modifications, conditions, and limitations (including but not limited to the conditions applied to consumptive use reservations in Exhibits A and C attached to this Order) the application of the BLM is granted as set forth in Table 2.

2. Relative to other reservations the priority date of the BLM shall be subordinate to the consumptive use reservations granted to all municipalities and the instream flow rights granted to the Montana Department of Health and Environmental Sciences, and DFWP. It shall be prior to all other reservations granted to Conservation Districts and the reservation granted to Bureau of Reclamation.

3. Any and all liability arising from the reservation or the use of the reservation is the sole responsibility of the applicant. By granting such reservations, the Board on behalf of itself and the Department of Natural Resources and Conservation assumes no liability.

4. BLM shall within two years of the date of the Final Order submit to the Board a list of monitoring sites and a method of determining the extent of the instream flow along the reach proportional to the monitoring site. Until approval of this monitoring report the BLM may not object to any changes of use by other users within a reach.

5. The BLM instream flow reservation shall run concurrently with and overlap rather than run consecutively with any other non-consumptive water rights including but not limited to all hydropower rights and other instream flow reservations.

6. The BLM reservation shall have no force and effect in any basin, subbasin, drainage, subdrainage, stream, or single source of supply for the period of time and for any class of use for which permit applications are precluded.

TABLE 2
SUMMARY OF RESERVATIONS GRANTED TO THE
BUREAU OF LAND MANAGEMENT

STREAM	LOCATION	STREAM MILES WITHIN PUBLIC LANDS	YEAR-ROUND AMOUNT (CFS)	INSTANTANEOUS PEAK DISCHARGE AMOUNT (CFS)
Deep Creek	T2N-R12W-S20	.9	18	500
Bear Creek	T2N-R12W-S34	1.1	2.5	50
Canyon Creek	T2S-R9W-S6	.9	5.0	110
Moose Creek	T2S-R9W-S13&23 T1S-R8W-S7,8,9&18	5.5	8	70
Camp Creek	T2S-R8W-S2,9, 10,11,17,19&20	6.5	5	50
Willow Creek	T4S-R9W-S31&32	1.9	12	130
East Fork Dyce Creek	T6S-R12W-S14, 23,26&35	3.75	1.4	9
West Fork Dyce Creek	T6S-R12W-S14, 22,23&26	3.8	.7	5
Bloody Dick Ck.	T9S-R15W-S23	1	20	270
Medicine Lodge Creek	T12S-R12W-S13 T13S-R12W-S2&26	1	9	50
Rape Creek	T10S-R13W-S21&28	1	.4	5
Shenon Creek	T10S-R13W-S29,30, 32&33; T10S-R14W-S25	3.5	.4	13
Black Canyon Creek	T11S-R14W-S19,20, 21	2.8	2.5	35
Bear Creek (Horse Prarie Creek Drainage)	T10S-R15W-S34	1.3	1	50
Trapper Creek	T10S-R15W-S34	1.3	.7	10
Frying Pan Ck.	T10S-R25W-S22,27&28	1	1.5	35

TABLE 2 (cont.)

STREAM	LOCATION	STREAM MILES WITHIN PUBLIC LANDS	YEAR-ROUND AMOUNT (CFS)	INSTANTANEOUS PEAK DISCHARGE AMOUNT (CFS)
Cabin Creek	T14S-R12W-S1&12	1.3	.4	4
Indian Creek	T14S-R12W-S24	1.3	.2	5
Simpson Creek	T14S-R12W-S25&30	0.8	.7	5
Deadman Creek	T15S-R10W-S22	2.0	4.5	50
Big Sheep Ck.	T13S-R9W-S30 T13S-R10W-S25,35&36 T14S-R10W-S2,10,15,22&34 T15S-R10W-S3,10&22	10.0	32.5	300
North Fork Greenhorn Creek	T8-R4W-S13&24	1.3	3.5	35
Jones Creek	T14S-R3W-S33	1.1	1.9	20
Peet Creek	T15S-R4W-S3&10 T14S-R4W-S34	2.25	.9	30
Corral Creek	T14S-R1E-S22&27	1.5	2.5	20
Odell Creek	T14S-R1W-S31	0.8	11	225
Long Creek	T13S-R4W-S1&2	3.9	3.4	110
Hellroaring Ck.	T14S-R1E-S35&26	0.75	15	250
Tom Creek	T14S-R1E-S32	1.2	1.4	25
East Fork Blacktail Deer Creek	T11S-R5W-S27,34&35	3.4	18	215
West Fork Blacktail Deer Creek	T12S-R6W-S35	2.5	1	25